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SURGICAL ENDOSCOPY
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# Laparoscopic treatment of pancreatic pseudocysts

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**Abstract**
*Background:* A multicentric study was performed to evaluate the clinical results after laparoscopic treatment of pancreatic pseudocysts (PP).
*Methods:* We collected the data of 17 patients presenting with PP and operated on by laparoscopy between 1996 and 2001. There were nine men and eight women with a median age of 42 years (range 30–72). In 15 patients the PP developed after acute pancreatitis and the median delay between the acute onset and surgery was 7 months (range: 2–24). In two patients the PP was associated with chronic pancreatitis. All the patients had a single PP with a median diameter of 9 cm (range: 5–20).
*Results:* According to the location of the PP, a cystogastrostomy was performed in 10 patients and a cystojejunostomy in seven patients. The median operative time was 100 min (range: 80–300). Laparoscopic PP surgery was completed successfully in 16 patients and the median size of the cystoenterostomy was 3 cm (range: 2–5). Necrotic debris was present within the PP in 11 patients. The median postoperative hospital stay was 6 days (range: 4–24). No mortality and no immediate morbidity were recorded.However, two patients were readmitted within the first 3 postoperative weeks because of secondary PP infection. The first patient had an early closure of cystogastrostomy and was treated by endoscopic placement of a stent. The second represented with a right retrocolic abscess after cystojejunostomy and was treated by percutaneous drainage. One patient was lost for follow-up 2 months after surgery. The others had regular clinical and radiological controls. With a median follow-up of 12 months (range: 6–36), no recurrence of PP was observed.
*Conclusions:* The laparoscopic treatment of PP was associated with a low postoperative complication rate and an effective permanent result. That approach avoided some difficulties, particularly bleeding that is classically linked with endoscopic internal drainage.

**Key words:** pancreatic Pseudocyst — Laparoscopy — Cystogastrostomy — Cystojejunostomy — Internal drainage — Pancreatitis

Pancreatic pseudocyst (PP) is a collection arising in or adjacent to the pancreas but lacking a true epithelial lining [4, 20]. It is widely accepted that PP may have different origins according to the underlying disease. PP is an inflammatory process in nature and may be caused by acute and chronic pancreatitis or by pancreatic trauma. Depending on the series quoted, PP occurs in roughly 10% to 20% of all pancreatitis cases [19, 25]. PP associated with acute necrotizing pancreatitis results from autodigestion of the pancreatic gland and extravasation of pancreatic juice inducing necrosis of the tissues with which it comes in contact [12]. Up to 85% of those cysts resolve spontaneously within 6 weeks and seldom require intervention [32]. Beyond that period, cysts $>6$ cm are associated with a poor chance of resolution and with a significant risk for the development of complications including infection, bleeding, compression, or rupture [6]. On the other hand, it is hypothesized that PP associated with chronic pancreatitis results from duct outflow obstruction due to stone or stricture causing distension and rupture of smaller ducts. Therefore, a persistent communication between the pancreatic duct and the PP is often present and spontaneous cyst resolution is very uncommon [30]. Internal drainage is the treatment of choice for uncomplicated symptomatic cysts. The most recent

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